



סמינר - SEMINAR

הנך מוזמן/ת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתתקיים ביום ב' 3.08.15 (יח' באב, תשע"ה), בבניין דן-קאהן, קומה 0, אודיטוריום 1, שעה 14:30.

ירצה:

Assistant Professor Shmulik Osovski
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על הנושא:

Microscale modeling of ductile fracture: Status, Challenges and Opportunities

להלן תקציר ההרצאה:

One of the most challenging fields in computational mechanics, is the prediction of ductile failure. Most ductile structural alloys have been observed to fail through a mechanism involving the nucleation, growth and coalescence of voids. As such, it has been a problem of longstanding research and investigation aiming to gain a better grasp of the physical mechanism involved, as well as improve the prediction capabilities through sophisticated numerical methods. Structural components, are going through complex loading paths and large deformations in their forming stage, and later on are exposed to multi-axial non monotonic loading. The prediction of ductile failure under such circumstances requires understanding of the damage accumulation mechanisms at the micro-scale level, to be carried up into component level simulations in the form of high-level models. Understanding the role of various microstructural features in the ductile failure process, will pave the way to application tailored materials. In this presentation, I will address some of the recent development in the field, while highlighting the key challenges we face as a community. References to both promising numerical methods, as well as constitutive models and experimental observations will be made. Finally, I will discuss the opportunities, which are emerging side by side with advances in manufacturing methodologies.

בברכה,

פרופ' אורי איתן
מרכז הסמינרים